User Manual

Wireless IR Control Panels

Version 02

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User Manual Wireless IR Control Panels
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1. Introduction

1.1. Overview

The **irCUE 99** and **irCUE** wireless handheld remote control panels are compact infrared transmitter s with a distinctive wooden and stainless / metal steel enclosure. The irCUE 99 is supplied in four versions of wood – mahogany, birch, white birch and oak. The irCUE 99 is designed to blend with the most critical environments. Providing 32 backlight buttons, the irCUE 99 remote control is designed to fit perfectly in your hand. The irCUE remote control is designed to fit perfectly in your hand and provides 25 buttons supported with backlight and programmable functions. It is the ideal solution for control of audio, video and lightning in boardrooms, conference rooms and homes.

The **irCUE Receiver** is an infrared receiving unit designed for ceiling mounting (similar to halogen lamps mounting). Using multiple IR receivers within the unit, the irCUE Receiver provides signal receiving in a horizontal level from all directions. With direct connectivity to the Assistant or Assistant-S control units, it is possible to connect up to 10 receivers to a single control unit.

The **irCUE Receiver 485** links IR wireless control panels to the CUEwire (RS-485). It is an infrared receiving unit designed for ceiling mounting (similar to halogen lamps mounting). Using multiple IR receivers within the unit, the irCUE Receiver 485 provides signal receiving in a horizontal level from all directions.

1.2. Models

Model	Product code	Description
irCUE 99	CS0149	Wireless IR remote hand-held control panel, 32 buttons
irCUE	CS0133	Wireless IR remote hand-held control panel, 25 buttons
irCUE Receiver	CS0080	IR receiver for Assistant or Assistant-S
irCUE Receiver 485	CS0169	IR receiver with connection to CUEwire

1.3. Features

- (32) or (25) freely programmable buttons
- IR one way communication
- Max. transmitting range 25 m / 82 ft
- Rechargeable battery pack

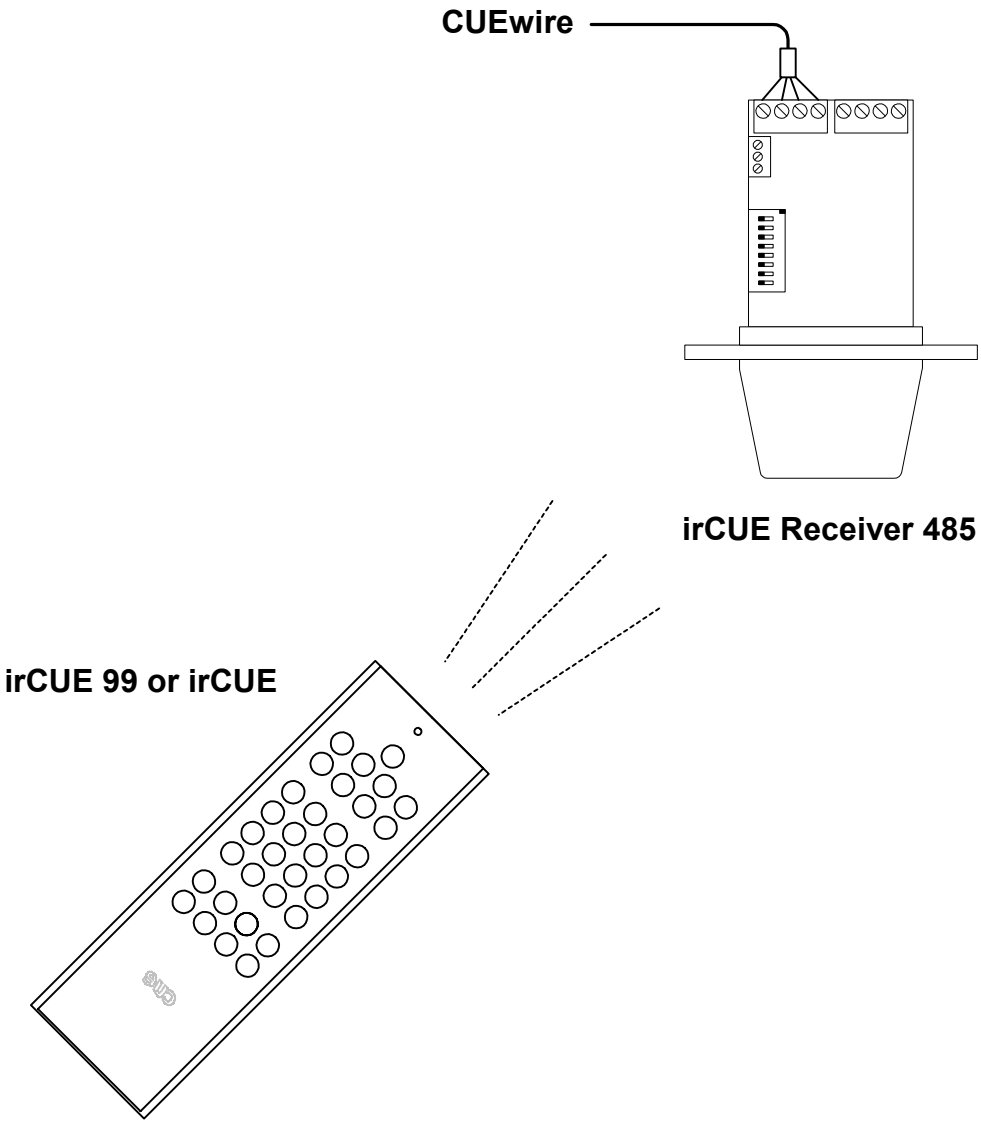
1.4. Programming

All panels are programmed using **Cue Director** programming tool. Control commands are described in the **Programming Manual CPL References**, chapter Keyboards.

2. Using

The irCUE 99 and irCUE are connected to the rest of control system via IR communication with the unit irCUE Receiver or irCUE Receiver 485. The receivers then provide a connection via IR input or via CUEwire to the control units Assistant or Assistant-S.

The example of irCUE 99 and irCUE Receiver 485 configuration is described on the picture below.

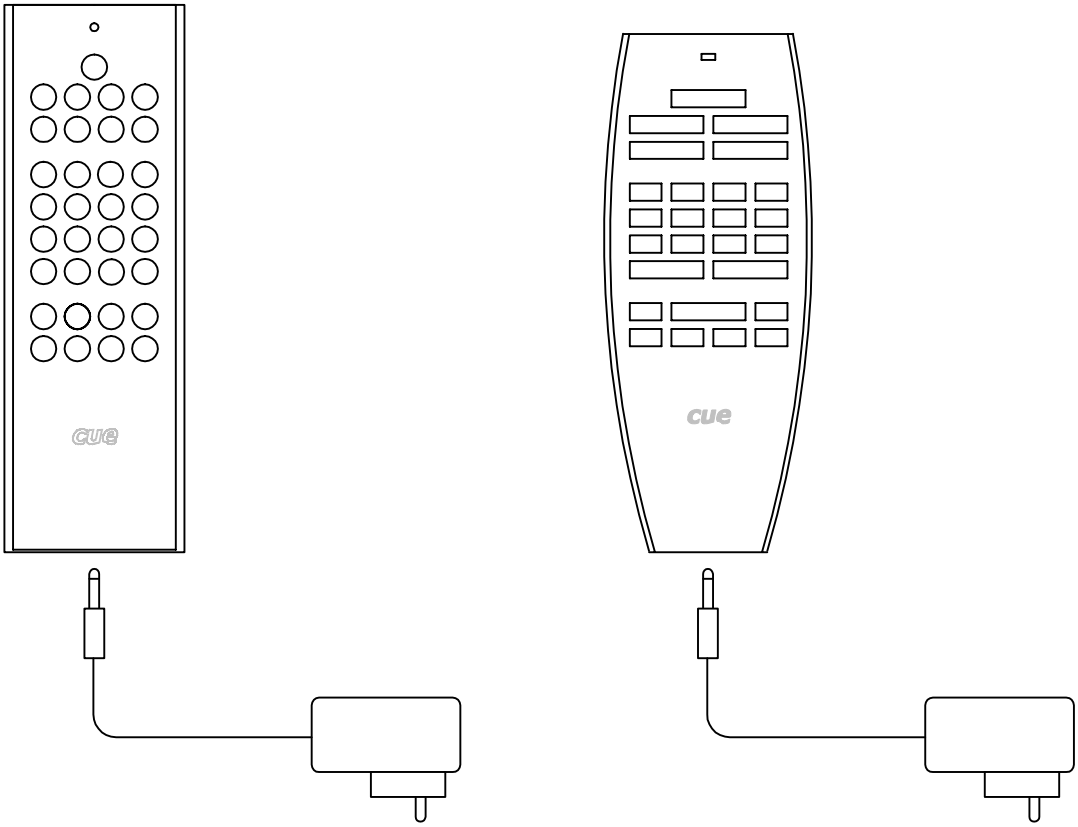


3. Charging

The irCUE 99 and irCUE wireless remote control panels are powered from internal accumulators 1 100 mAh.

To charge the accumulators, use the delivered power supply adapter. The connector for connecting the charger is on the bottom side. Charging time for fully charged accumulator is **15 hours**. Longer charging time is not dangerous because the protection against overcharging is built-in.

It is recommended to connect the panel to the charger at the end of every working day. Connect the charger to the panel also in case you find the lower range of the transmission or when the backlight brightness is reduced.



4. Front Panel

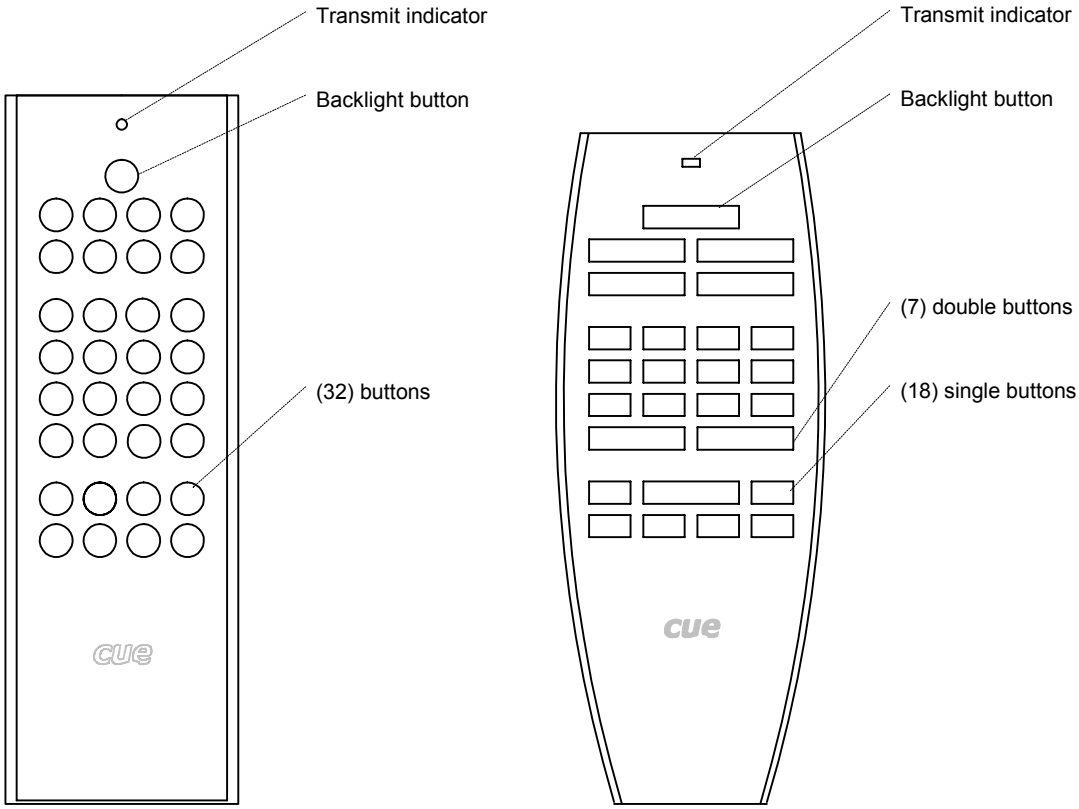
The front panels are equipped with

- Functional buttons
- Backlight button
- Transmit indicator

The **Functional buttons** send IR codes to irCUE Receiver.

The **Backlight button** activates the backlight of all buttons. The backlight lights a few seconds and after that it switches off automatically.

The **Transmit indicator** lights during IR transmitting.



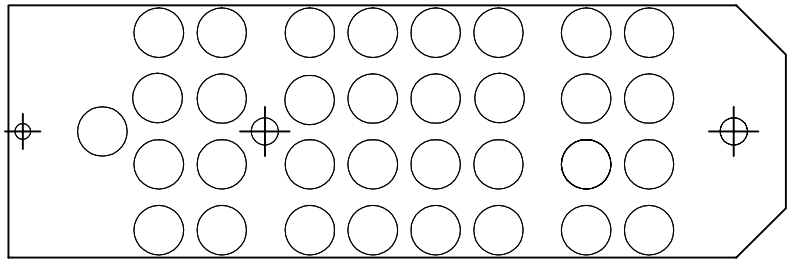
5. Button Labels

5.1. irCUE 99 .....

The panel uses one big label foil for all buttons.

Steps

1. Use AutoCAD file named **CS0149.0001.3-Foil.dwg** for preparation of a layout. This file is available on www.cuesystem.com. The foil shape is described on the picture below.



2. Print the foil on a standard printer.
3. Cut the foil into a shape according the picture (see above).
4. Put the panel upside down.
5. Unscrew two screws from the rear side of the panel.
6. Remove the front panel with buttons and foil **still holding it upside down**.
7. Replace the foil.
8. Put the front panel back.
9. Fasten the screws.

5.2. irCUE .....

The separate labels for each button can be printed on a standard printer. Dimension of the label are

- 6.5 mm x 12 mm for normal button
- 6.5 mm x 29 mm for double button.

It is necessary to disassembly the control panel to change a label.

Steps are

1. Put the control panel on a table face down.
2. Unscrew the screws.
3. Dismount the bottom of the control panel with electronic board.
4. Install new labels to all buttons.
5. Assembly the control panel.

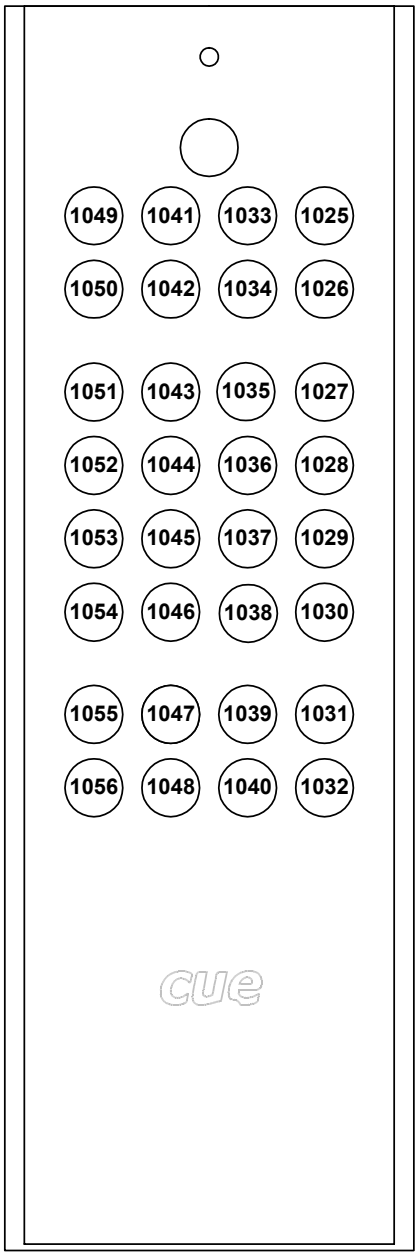
6. Addressing

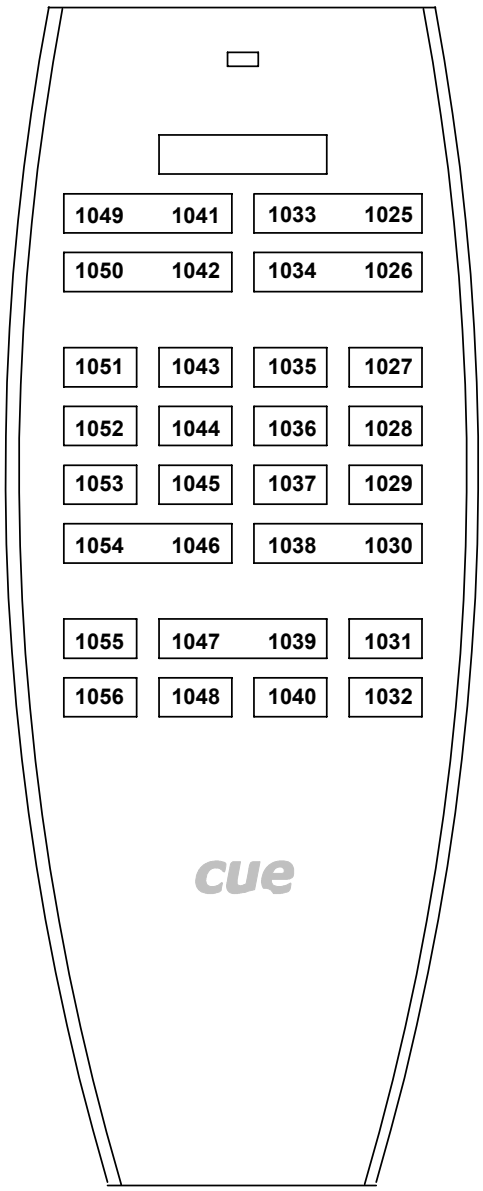
The BUTTON_ID transmitted by a panel is number used in the programming for button identification. The value depends on a button position and it depends on a panel ADDRESS too. Both values are calculated according formula

BUTTON_ID = Offset + Button Code
Offset = 32 * ADDRESS

For addressing with irCUE Receiver 485 see chapter **Receivers / irCUE Receiver 485 / Addressing**.

The **lowest** BUTTON_ID is generated by a button in the **upper right** corner the **highest** BUTTON_ID is generated by a button in the **lower left** corner - see example for ADDRESS = 0.





The ADDRESS of the panel can be set in the range **0** to **9** by the firmware. Standard panel has address 0, addresses 1 to 9 are delivered on a special order.

In the table below there are BUTTON_ID ranges for all addresses.

ADDRESS	BUTTON_ID range	
0	1025	1056
1	1057	1088
2	1089	1120
3	1121	1152
4	1153	1184
5	1185	1216
6	1217	1248
7	1249	1280
8	1281	1312
9	1313	1344

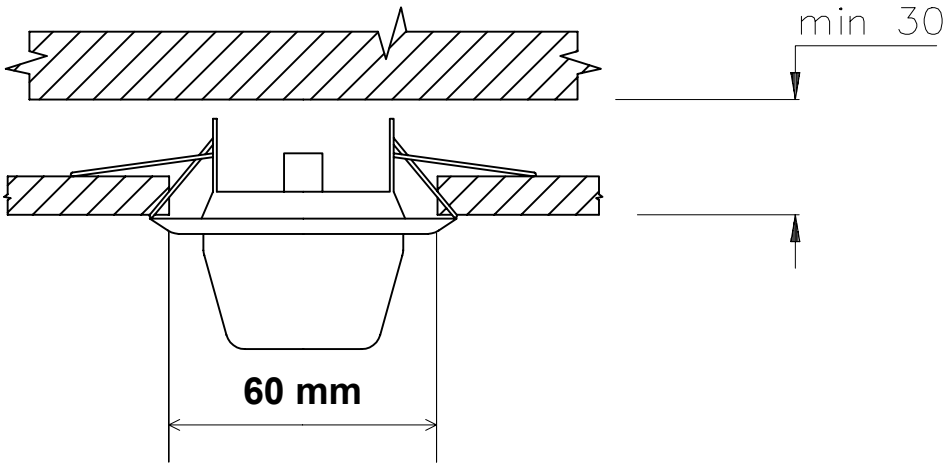
7. Receivers

7.1. irCUE Receiver .....

7.1.1. Mounting

The ceiling near the center of the room is the best place to install it. The receiver can be mounted to the double ceiling as described on the picture below. **The whole diameter is 60 mm.** The minimum vertical space for the receiver is 30 mm.

All dimensions are in mm.

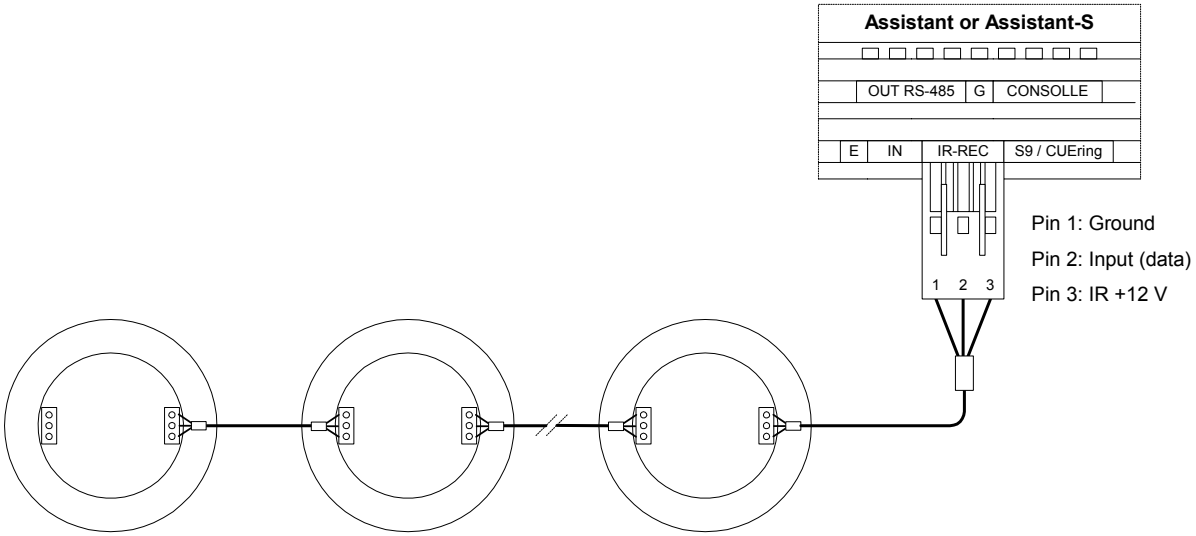


7.1.2. Connecting

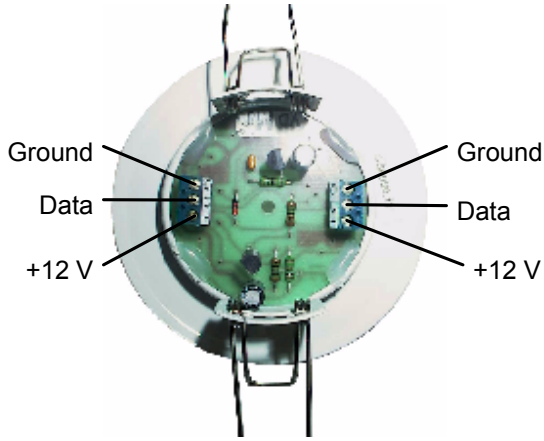
The irCUE Receiver can be connected to

- Assistant or Assistant-S using input marked IR-REC
- irCUE Receiver 485 - see connection example in the following chapter.

Up to **(10) receivers** can be connected in parallel. Connection example is described on the pictures below.



The terminal location and pin connection of the irCUE Receiver is described below. Both terminals on irCUE Receiver are connected in parallel.



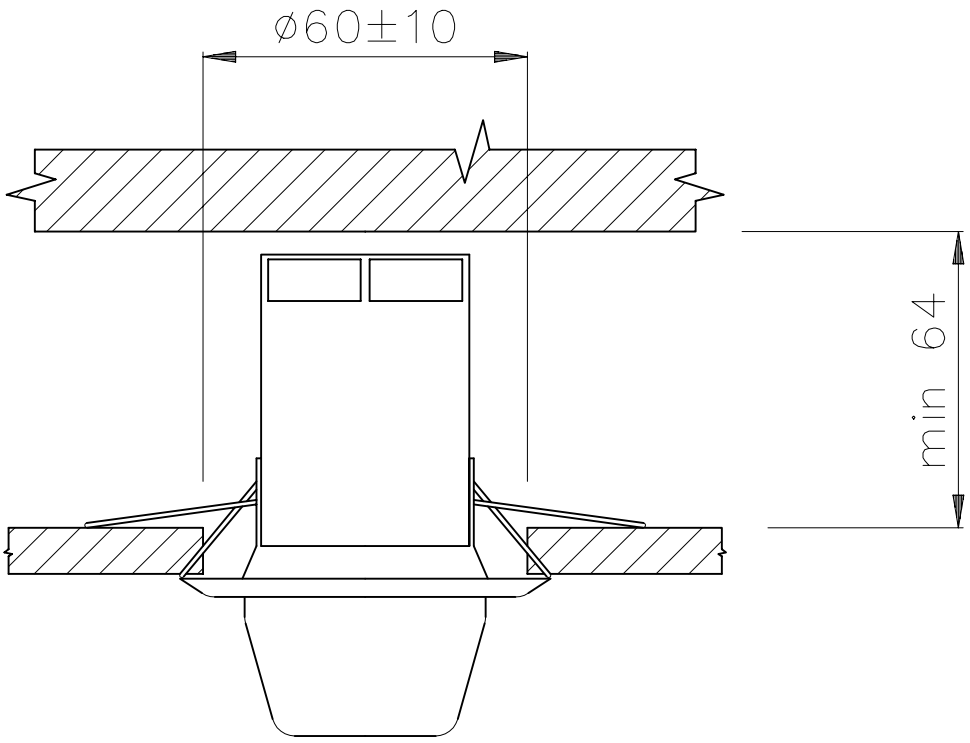
Signal Name	irCUE Receiver Terminals	Assistant IR-REC	Assistant IR-REC
Ground	G	4b	8
Data	D	5b	9
+12 V	+	6b	10

7.2. irCUE Receiver 485.....

7.2.1. Mounting

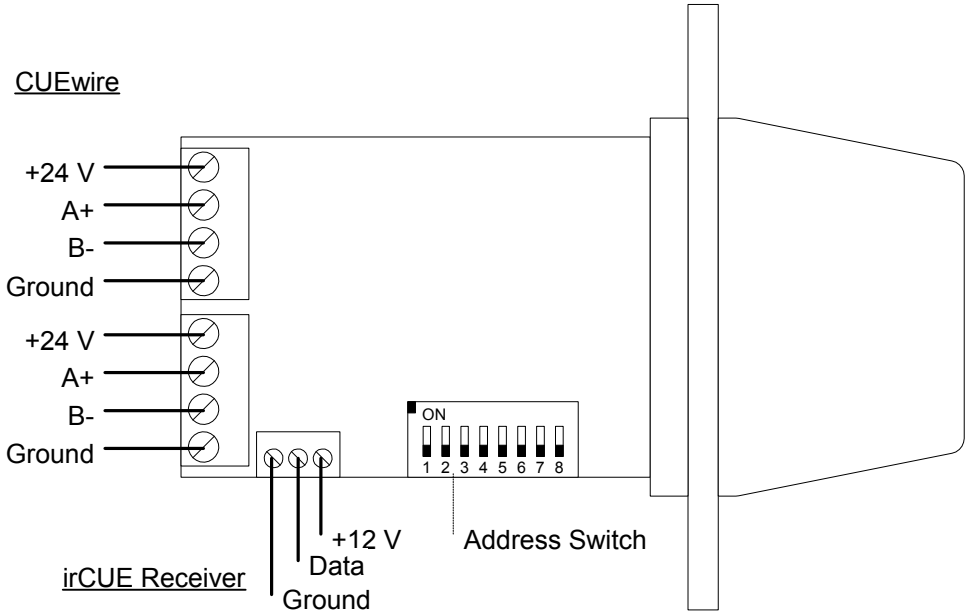
The ceiling near the center of the room is the best place to install it. The receiver can be mounted to the double ceiling as described on the picture below. **The whole diameter is 60 mm**. The minimum vertical space for the receiver is 64 mm.

All dimensions are in mm.

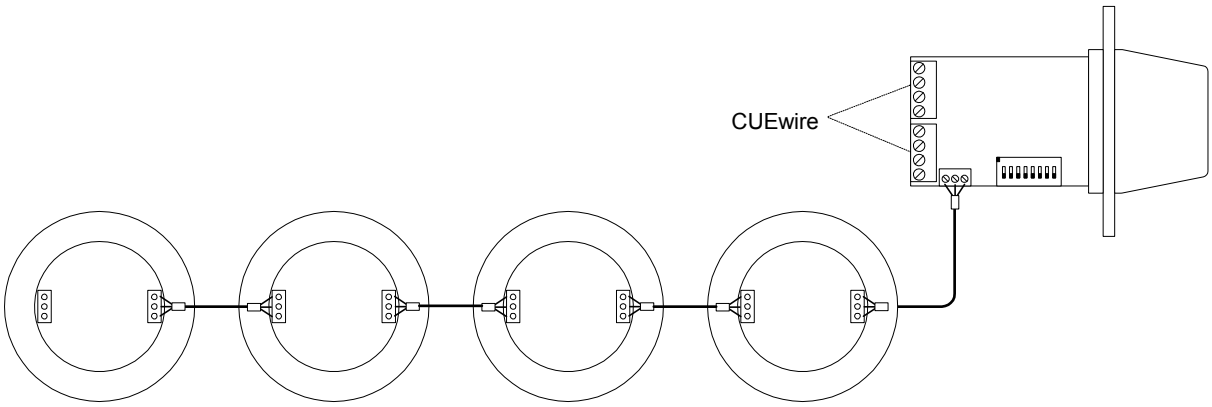


7.2.2. Connecting

Using terminals, irCUE Receiver 485 can be connected to CUEwire.

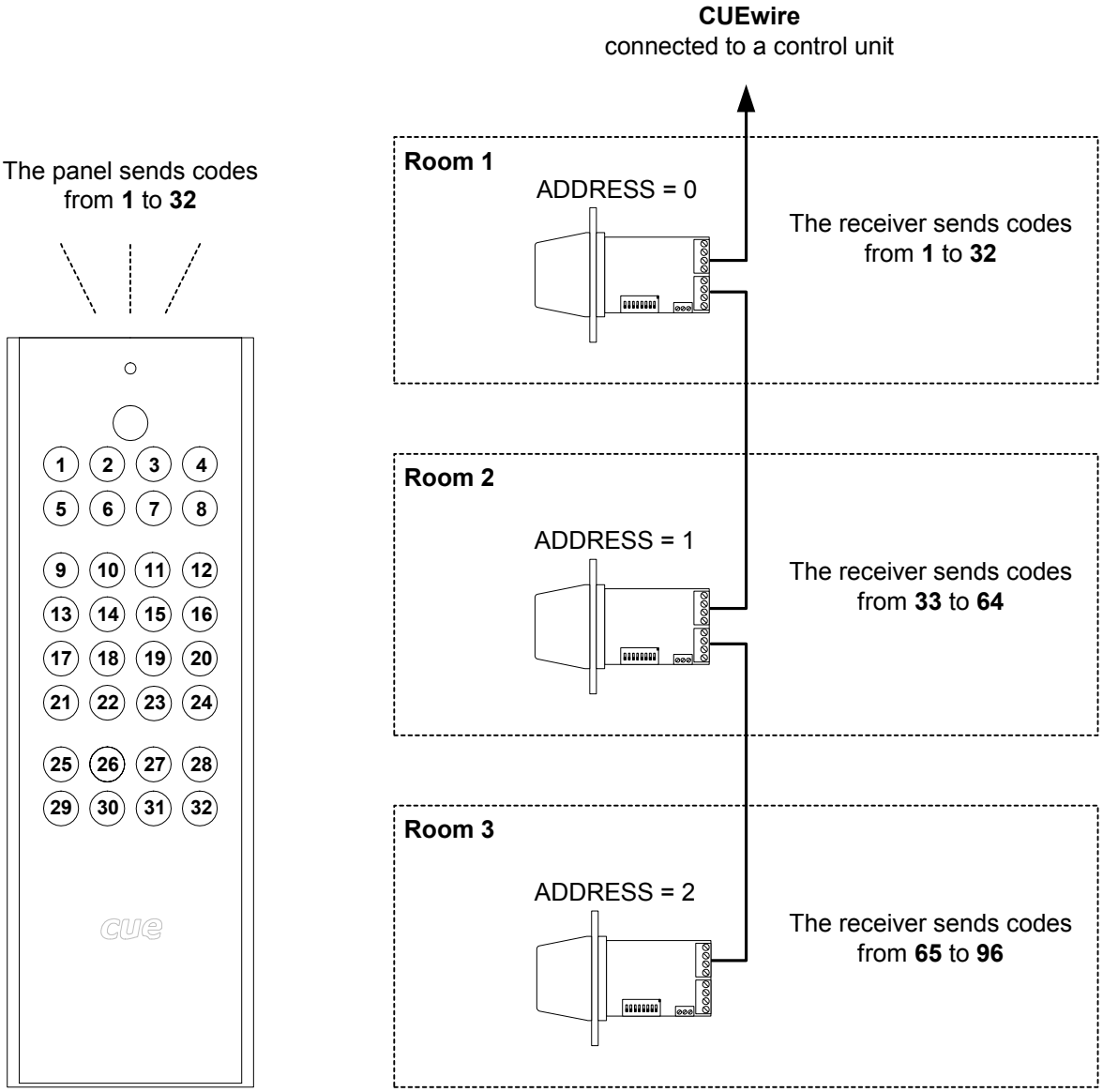


To extend the coverage, it is possible to connect up to (4) irCUE Receivers (CS0080-C) - see picture below.



7.2.3. Addressing

It is possible to add an offset to a BUTTON_ID sent by the panel using irCUE Receiver 485. It can be very helpful in multi room installation - the same panel can be identified in each room. That means one panel can start different actions in different rooms - see example on the picture below.

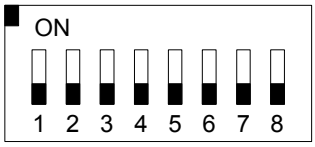

CUEwire
connected to a control unit
The panel sends codes from 1 to 32
1 2 3 4
5 6 7 8
9 10 11 12
13 14 15 16
17 18 19 20
21 22 23 24
25 26 27 28
29 30 31 32
cue
Room 1
ADDRESS = 0
The receiver sends codes from 1 to 32
Room 2
ADDRESS = 1
The receiver sends codes from 33 to 64
Room 3
ADDRESS = 2
The receiver sends codes from 65 to 96

The address of the receiver can be set up by the Address Switch - see picture above. BUTTON_ID sent by irCUE Receiver 485 to the control unit is a BUTTON_ID sent by IR wireless control panel with an added OFFSET value. Button ID and OFFSET value are calculated according formulas below.

BUTTON_ID (irCUE Receiver 485) **= Offset + BUTTON_ID** (IR wireless control panel)

Offset = 32 * ADDRESS

ADDRESS is binary coded by DIP switch in the range **0** to **255**.



SW1 – ADDRESS bit 0
SW2 – ADDRESS bit 1
SW3 – ADDRESS bit 2
SW 4 – ADDRESS bit 3
SW 5 – ADDRESS bit 4
SW 6 – ADDRESS bit 5
SW 7 – ADDRESS bit 6
SW 8 – ADDRESS bit 7

ADDRESS of irCUE Receiver 485	OFFSET	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
0	**0**	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
1	**32**	**ON**	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	**64**	OFF	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
3	**96**	**ON**	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
...									
255	**8 160**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**	**ON**

8. Troubleshooting

1. The Brightness of LEDs is Visibly Decreasing.
    - Charge the accumulator immediately.

2. When pressing the button the LEDs are going on and off immediately and then back-light button flashes several times.
    - The accumulator is totally discharged.
    - When waking up from the sleep mode it tries to light on the LEDs.
    - The increased consumption causes a drop of voltage, which then resets the microprocessor.
    - Charge the accumulator immediately.

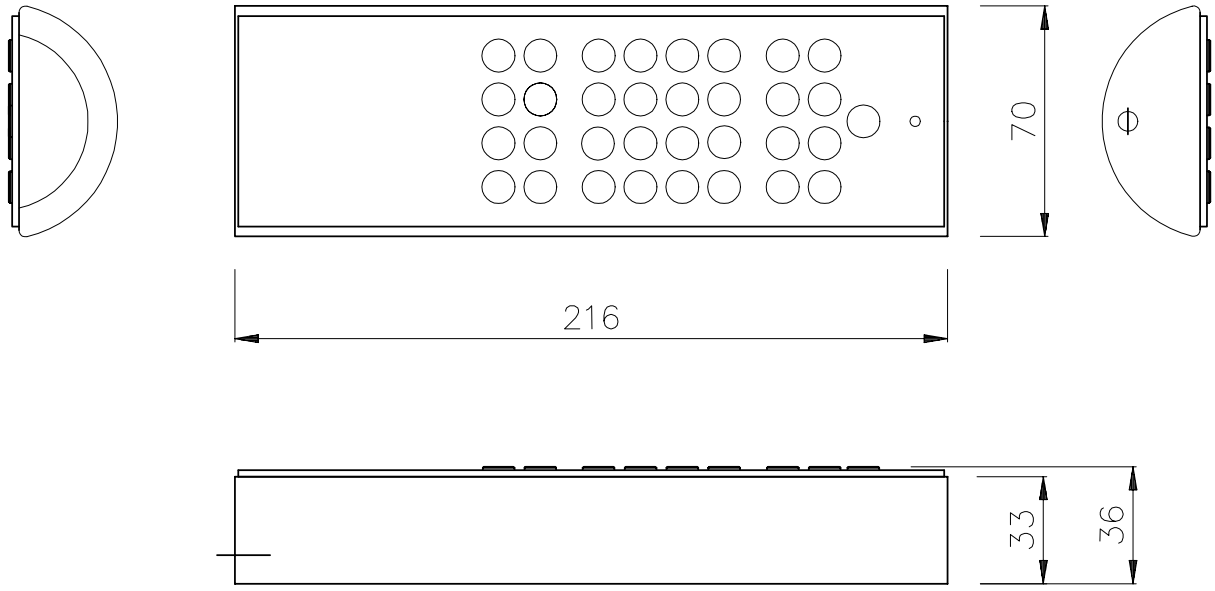
3. The IR operating range is short.
    - Check the accumulators in the panel and recharge them.
    - Change position of the panel or receiver.

9. Specifications and Mechanical Drawings

9.1. irCUE 99 .....

Buttons layout	(32) buttons
Indicator	Flashing during transmition
Communication	IR
Max. transmitting range	25 m / 82 ft
Power supply	NiMH rechargeable battery pack
Enclosure	Wood - stainless steel panel
Dimensions (WxHxD)	215 mm (8.5”) x 70 mm (2.8”) x 33 mm (1.3”)
Weight	0.38 kg / 1 lb
Supplied accessories	Charger, 110 - 230 VAC, 50 / 60 Hz

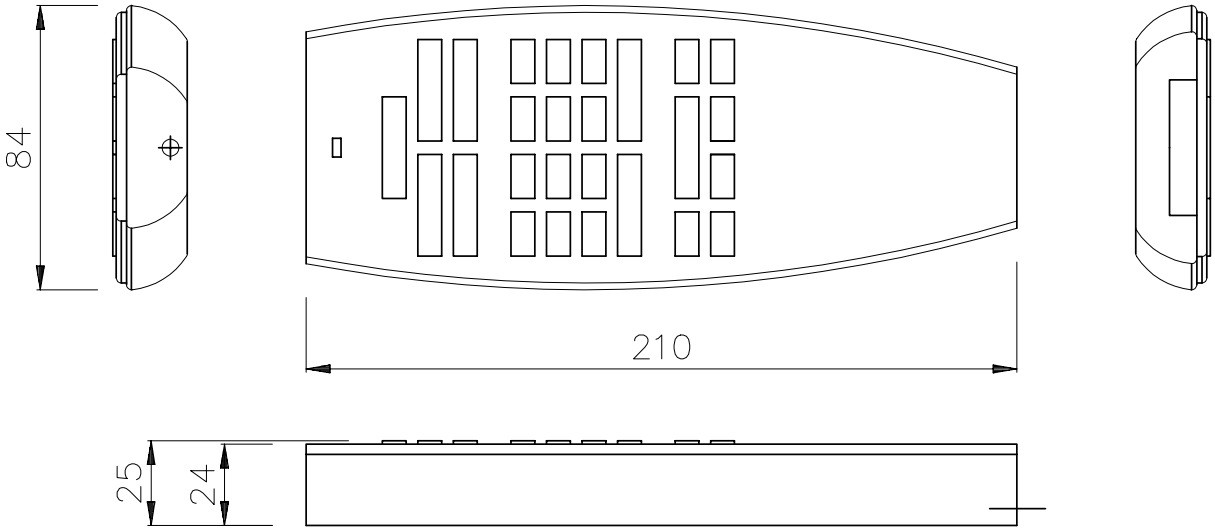
All dimensions are in **mm**.



9.2. irCUE

Buttons	(18) single, (7) double
Indicator	Flashing transmitting
Communication	IR
Max. transmitting range	25 m / 82 ft
Power supply	NiMH rechargeable battery pack
Enclosure	Wood - black metal panel
Dimensions (WxHxD)	210 mm (8.3”) x 83 mm (3.3”) x 22 mm (0.9”)
Weight	0.32 kg / 0.9 lb
Supplied accessories	Charger, 100 - 230 VAC, 50 / 60 Hz

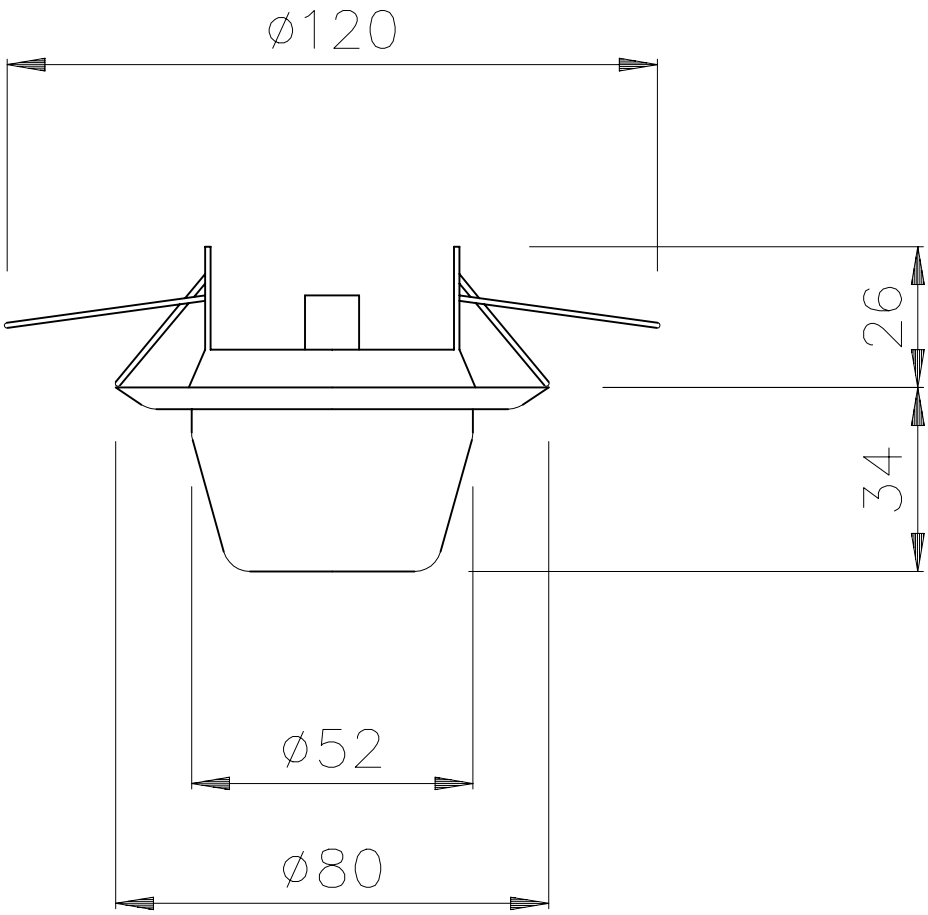
All dimensions are in **mm**.



9.3. irCUE Receiver .....

Receiving.....Horizontal level 0 - 360 degrees
Vertical level .....60 degrees
Connection .....Assistant or Assistant-S IR input, screw terminals
Power supply.....12 VDC, 1 W
Enclosure.....Metal, plastic cover
Dimensions.....Diameter 75 mm (3.0”), height 80 mm (3.2”)
Weight.....0.1 kg / 0.3 lb

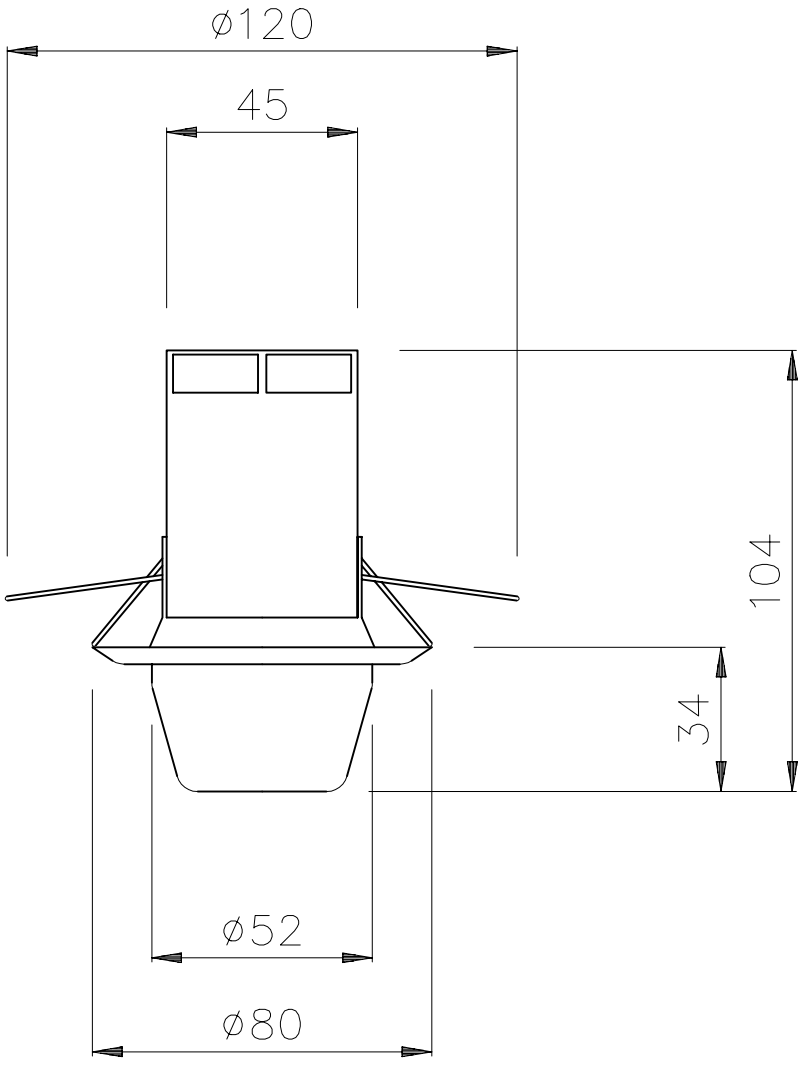
All dimensions are in **mm**.



9.4. irCUE Receiver 485.....

Receiving.....Horizontal level 0 - 360 degrees
Vertical level .....60 degrees
System connection .....CUEwire (RS-485), screw terminals
Power supply.....24 VDC (+/- 20%), 1 W
Enclosure.....Metal, plastic cover
Dimensions.....Diameter 81 mm (3.2”), height 104 mm (4.1”)
Weight.....0.1 kg / 0.3 lb

All dimensions are in **mm**.



10. Software and Firmware License

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11. Warranty Conditions

Warranty Duration

CUE provides warranty for all CUE products for a period of 3 years from the day of purchase. The provided warranty for touch screens is 2 years from the day of purchase. CUE accepts reclamation of 5 not properly working dots and more (2 dots join – 1 counts). The warranty provided for rechargeable accumulators is 6 months from the day of purchase

Liability

CUE is not liable for any consequential damage caused by CUE products including any loss of profits, incidental or consequential damages or any claims made by a third parties.

General Warranty Terms

a) CUE warrants that its products are without defects in material and are fully functional for the duration of the warranty.
b) Warranty repairs are free of charge. The customer will send the damaged device to CUE at his cost.
c) All warranty repairs and after warranty services are made at CUE premises. It is strictly prohibited to repair CUE products or to change any accessory parts, except those parts with limited service life. CUE is not liable for consumables or parts with limited service life (lamps, batteries etc.)
d) The warranty further does not apply to the following cases
    - Damages caused by operating the system not according to the conditions defined in user manual or instruction (wrong power supply voltage, operation outside deferred temperature range, operation in humid environment and mechanical damages).
    - Damages caused by faulty service, maintenance, connection, and use of other than original connection cable.
    - Damage caused by agencies i.e. incidental or unpredictable impacts (fire, earthquake, flood, thunder, strong electric induction, water, strong wind, theft, vandalism etc.)

After Warranty Services

a) All warranty repairs are normally on a ‘back to base’ basis, as defined in 3 c)
b) All out warranty repair costs will be fully charged to the customer.
c) In cases where our staff are called out to assist, cost of transport and time will be at customer cost

12. CE Declaration of Conformity

We, the producer
CUE spol. s r. o., Na Dolinách 6, Praha 4, Czech Republic
acknowledge our sole responsibility, that the product incl. accessories

Kind of equipment
Remote Control System

Type designation
CS0197 touchCUE-L 99, CS0159 touchCUE 99, CS0157 touchCUE-S 99,
CS0183 touchCUE-V, CS0198 touchCUE-L, CS0200 touchCUE-M, CS0176 touchCUE-MM, CS0122 touchCUE,
CS0142 touchCUE-S,
CS0178 touchCUE-V /t, CS0199 touchCUE-L /t, CS0204 touchCUE-M /t, CS0143 touchCUE-S /t,
CS0158 touchCUE-S /w,
CS0224 touchCUE-S /d,
CS0205 touchCUE-M /r, CS0144 touchCUE-S /r
ST0007 Guide, CS0188 touchCUE-SRF, CS0171 rfbaseCUE,
ST0013 monitorCUE-V, CS0203 monitorCUE, CS0190 touchCUE-V /i, CS0151 PC Interface 485
CS0170 rfCUE 99, CS0170 rfCUE 99, CS0149 irCUE 99, CS0133 irCUE, CS0080 irCUE Receiver,
CS0169 irCUE Receiver 485,
CS0221 keypadCUE-1G, CS0222 keypadCUE-2G, CS0223 keypadCUE-3G,
CS0145 keyboardCUE 99, CS0128 keyboardCUE, CS0174 keyboardCUE-S, CS0129 keyboardCUE /t,
CS0146 keyboardCUE-S /w, CS0130 keyboardCUE /r, CS0191 inputCUE,
CS0173 eCUE
CS0051 Assistant, CS0150 Assistant-S, CS0100 PC Card, CS0227 CUEwire Splitter,
CS0008 smartCUE, CS0201 sbiCUE-DMX, CS0009 soundCUE, CS0004 analogCUE, CS0005 auxCUE,
CS0165 PED202, CS0166 PEF200, CS0167 PER610, CS0163 PEC25, CS0225 PEA208, CS0164 PED108,
CS0184 CUEadapter /10W, CS0226 CUEadapter /20W, CS0185 CUEadapter /50W, CS0186 CUEadapter /80W,
CS0168 PES03, CS0016 powerAUX,
PT0005 Cue Director, PT0004 Teach-In, PT0006 WinKit

in accordance with **EMC Directive 89/336/EEC**,
is in compliance with the following norms or documents:
EN50082-1 (IEC801-2), IEC65(CO)39, DIN VDE 0839 part 82-1, DIN VDE 0843 part 4, IEC801-4,
EN50081-1 EN55022 class B, DIN VDE 0839 part 81-1, EN55014, EN55011.

Jaroslav Dibitanzl
Member of Board of Directors

13. FCC

Caution

Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

Notes